

## A new genus for the waterthrushes (Parulidae)

by George Sangster

Received 12 October 2007

The genus *Seiurus* Swainson, 1827, currently comprises three universally recognised species (Lowery & Monroe 1968, AOU 1998, Dickinson 2003). Northern Waterthrush *S. noveboracensis* (J. F. Gmelin, 1789) and Louisiana Waterthrush *S. motacilla* (Vieillot, 1809) are very similar and can be difficult to separate in the field (Binford 1971, Wallace 1980), whereas Ovenbird *S. aurocapilla* (Linnaeus, 1766) is unmistakable due to its very distinct head pattern and coloration, and its olive upperparts (Cramp & Perrins 1994). Inclusion of the waterthrushes and Ovenbird in a single genus implies a close relationship, but whilst Ovenbird and the waterthrushes do share some morphological and ecological traits, they are distinct in several others (Baird *et al.* 1875, Ridgway 1902, Eaton 1957, Griscom & Sprunt 1957, Bent 1963). Recent molecular phylogenetic studies indicate that *Seiurus* does not represent a monophyletic grouping and that generic separation is warranted.

### Systematics

Barrowclough & Corbin (1978) described electrophoretically assayed protein variation and differentiation in 15 species of Parulidae. They inferred phylogenetic relationships of nine species for which 30 or more loci could be examined (*S. aurocapilla*, *S. noveboracensis*, four species of *Dendroica* and three species of *Vermivora*). Their study indicated rather large allele differences between *S. aurocapilla* and *S. noveboracensis* at c.5 of 30 loci. The two species were distinct from seven other parulids on an unrooted dendrogram. However, the small number of ingroup species and the lack of any outgroup species precluded an assessment of whether they are sister taxa or not.

Avise *et al.* (1980) also examined protein data but included more species in their phylogenetic analysis than Barrowclough & Corbin (1978). Their results indicated strong differentiation between *S. aurocapilla* and *S. noveboracensis*, which showed little overlap in electromorph frequencies at five of 26 loci. A UPGMA dendrogram of 28 species of Parulidae indicated that *S. aurocapilla* and *S. noveboracensis* are not closely related.

Lovette & Bermingham (2002) used mitochondrial data to test monophyly of the Parulidae and included samples of *S. noveboracensis* and *S. aurocapilla*. Maximum likelihood and maximum parsimony trees of nucleotide-intensive (3,638 bp, 45 species including 35 parulids) and taxon-intensive (1,935 bp, 82 taxa including 36 parulids) analyses indicated that *S. noveboracensis* and *S. aurocapilla* are not closely related. Maximum likelihood analyses indicated that *S. noveboracensis* is sister to a clade of *Catharopeza bishopi*, *Parula americana*, *Setophaga ruticilla* and the three *Dendroica* species included in the study. This relationship was strongly supported (0.91 posterior probability). *S. aurocapilla* was sister to all other wood-warblers, including *S. noveboracensis*, except for a few aberrant species that formed part of other clades (e.g. Cardinalini) and should be excluded from Parulidae (Lovette & Bermingham 2002). Maximum parsimony trees were less resolved but supported the non-sister group relationship of *S. aurocapilla* and *S. noveboracensis*.

Hebert *et al.* (2004) analysed a 648-bp region of the mitochondrial gene cytochrome-c oxidase I (COI) for 260 species of North American birds, including 22 parulids. A neighbour-joining tree based on Kimura two-parameter distances indicated that *S. aurocapilla* and *S. noveboracensis* are not closely related, and placed these taxa on separate branches. A drawback was that branch support was not presented and may be low.

Klein *et al.* (2004) studied mitochondrial cytochrome-*b* sequence data (1,140 bp) of 56 species, including *S. aurocapilla* and *S. motacilla*, and 48 other parulids. Their study included shorter sequences but more ingroup taxa than Lovette & Bermingham (2002). *S. aurocapilla* was found to be sister to a large clade which included all species of Parulidae except a few 'oddball' genera probably best assigned to other families (e.g. *Icteria virens*, *Xenoligea montana*, *Microligea palustris*, *Teretistris fernandinae*). The position of *S. motacilla* was unstable between parsimony analyses with different weighting schemes. Although strong support for its relationships to other species was not identified, *S. motacilla* was not closely related to *S. aurocapilla* in any of the trees of this study.

Most recently, Lovette & Hochachka (2006) presented a phylogeny of 43 North American Parulidae, including all three *Seiurus* species, based on Bayesian analysis of long mtDNA sequences (4,116 nucleotides). The waterthrushes were shown to be sister taxa. *S. aurocapilla* was found to be sister to all other 'true' Parulidae species examined (including *S. noveboracensis* and *S. motacilla*), supporting the polyphyly of *Seiurus* as currently constituted.

## Taxonomy and nomenclature

Polyphyly of *Seiurus* is supported by five studies (Avice *et al.* 1980, Lovette & Bermingham 2002, Hebert *et al.* 2004, Klein *et al.* 2004, Lovette & Hochachka 2006). That by Barrowclough & Corbin (1978) did not include an outgroup, but their unrooted dendrogram is consistent with the phylogenetic trees of Lovette & Bermingham (2002) and Klein *et al.* (2004), if the root is placed on the lineage leading to *S. aurocapilla*. Because polyphyly of *Seiurus* is documented by several studies with high support values in some, Ovenbird and the waterthrushes should be recognised as separate genera. The distant phylogenetic position of the Ovenbird and the waterthrushes indicates that similarities in morphology (marked underparts, lack of rectal bristles) and ecology (terrestrial lifestyle) probably reflect convergence rather than common ancestry (Klein *et al.* 2004).

The name *Seiurus* was established by Swainson (1827a), who subsequently designated *S. aurocapilla* (Linnaeus, 1766) as its type species (Swainson 1827b). The evidence reviewed above implies that the generic name *Seiurus* should be restricted to Ovenbird; *Seiurus* thus becomes a monotypic genus.

The synonymy of *Seiurus* includes five names (Ridgway 1902, Hellmayr 1935): *Enicocichla* G. R. Gray, 1840 (type species: *Motacilla aurocapilla* [Linnaeus, 1766], hence a junior synonym of *Seiurus*); *Siurus* Strickland, 1841 (subsequent spelling of *Seiurus*); *Senurus* Reichenbach, 1849 (subsequent spelling of *Seiurus*); *Henicocichla* Cabanis, 1851 (subsequent spelling of *Enicocichla*); and *Exochocichla* van der Hoeven, 1855 (new name for *Seiurus*). None of these, however, is applicable to the waterthrushes. Because no generic name is currently available for the Northern and Louisiana Waterthrushes, this group may be known as:

### *Parkesia*, gen. nov.

#### *Type species*

*Motacilla noveboracensis* J. F. Gmelin, 1789 (currently *Seiurus noveboracensis*).

**Diagnosis.**—The two species of *Parkesia* are large, terrestrial parulids with plain upperparts and streaked underparts. *Parkesia* most closely resembles *Seiurus aurocapilla* but differs in (1) absence of an orbital ring, (2) presence of white or yellowish superciliary, (3) presence of dusky pre- and postocular stripe, (4) crown uniformly olive or sooty-brown without (pale) rufous central crown-stripe and dark lateral crown-stripes, and (5) upperparts dark olive-to grey-brown.

Some of the studies cited above suggest that *Parkesia* is closely related to *Catharopeza bishopi*, *Setophaga ruticilla*, *Parula americana* and *Dendroica*. *Parkesia*, however, clearly differs from all these; from *Catharopeza bishopi* mainly in (1) presence of a pale supercilium, (2) streaked underparts and (3) olive- to grey-brown crown and upperparts; and from all species of *Dendroica* and from *Setophaga ruticilla*, *Parula americana* and *P. pitiayumi* by a combination of (1) lack of pale wingbars, (2) presence of a white or yellowish supercilium and (3) plain upperparts.

**Taxonomic content.**—*Parkesia* comprises two extant species: *P. noveboracensis* (J. F. Gmelin, 1789) and *P. motacilla* (Vieillot, 1809). Based on their extremely similar morphology, a close relationship has been accepted ever since the two were recognised as separate species. Their sister relationship is also supported by molecular evidence (Lovette & Hochachka 2006).

**Etymology.**—It is a great pleasure to name this taxon for the late Kenneth C. Parkes, former curator at the Carnegie Museum of Natural History, Pittsburgh, to honour his lasting contributions to avian taxonomy, moult terminology, hybridisation and faunistics. Attachment of his name to the waterthrushes is appropriate given his long interest in Parulidae (e.g. Parkes 1951, 1961, 1978, 1995, Keppler & Parkes 1972, Latta *et al.* 1998, Latta & Parkes 2001). The gender of the name *Parkesia* is feminine.

#### Acknowledgements

I thank the referees, Terry Chesser and Steven Gregory, and Richard Schodde of the Standing Committee on Ornithological Nomenclature, for their helpful comments.

#### References:

- American Ornithologists' Union (AOU). 1998. *Check-list of North American birds*. Seventh edn. American Ornithologists' Union, Washington DC.
- Awise, J. C., Patton, J. C. & Aquadro, C. F. 1980. Evolutionary genetics of birds. Comparative molecular evolution in New World warblers (Parulidae) and rodents (Cricetidae). *J. Hered.* 71: 303–310.
- Baird, S. F., Brewer, T. M. & Ridgway, R. 1875. *A history of North American birds: land birds*, vol. 1. Little, Brown & Co., Boston.
- Barrowclough, G. F. & Corbin, K. W. 1978. Genetic variation and differentiation in the Parulidae. *Auk* 95: 691–702.
- Bent, A. C. 1963. *Life histories of North American wood warblers*. Dover Publications, New York.
- Binford, L. C. 1971. Identification of Northern and Louisiana Waterthrushes. *Calif. Birds* 2: 1–10.
- Curson, J., Quinn, D. & Beadle, D. 1994. *New World warblers*. Christopher Helm, London.
- Dickinson, E. C. (ed.) 2003. *The Howard & Moore complete checklist of the birds of the world*. Third edn. Christopher Helm, London.
- Eaton, S. W. 1957. A life history study of *Seiurus noveboracensis* (with notes on *Seiurus aurocapillus* and the species of *Seiurus* compared). *Sci. Stud., St Bonaventure Univ.* 19: 7–36.
- Gray, G. R. 1855. *Catalogue of the genera and subgenera of birds contained in the British Museum*. Brit. Mus., London.
- Griscom, L. & Sprunt, A. 1957. *The warblers of North America*. Devin-Adair Co., New York.
- Hebert, P. D. N., Stoeckle, M. Y., Zemplak, T. S. & Francis, C. M. 2004. Identification of birds through DNA barcodes. *Public Library of Science (Biol.)* 2(10): 1657–1663.
- Hellmayr, C. E. 1935. Catalogue of birds of the Americas. *Field Mus. Nat. Hist., Zool. Ser.* 13(8).
- Keppler, C. B. & Parkes, K. C. 1972. A new species of warbler (Parulidae) from Puerto Rico. *Auk* 89: 1–18.
- Klein, N. K., Burns, K. J., Hackett, S. J. & Griffiths, C. S. 2004. Molecular phylogenetic relationships among the wood warblers (Parulidae) and historical biogeography in the Caribbean basin. *J. Carib. Orn.* 17: 3–17.
- Latta, S. C. & Parkes, K. C. 2001. A possible *Dendroica kirtlandii* hybrid from Hispaniola. *Wilson Bull.* 113: 378–383.
- Latta, S. C., Parkes, K. C. & Wunderle, J. M. 1998. A new intrageneric *Dendroica* hybrid from Hispaniola. *Auk* 115: 533–537.
- Lovette, I. J. & Bermingham, E. 2002. What is a wood-warbler? Molecular characterization of a monophyletic Parulidae. *Auk* 119: 695–714.
- Lovette, I. J. & Hochachka, W. M. 2006. Simultaneous effects of phylogenetic niche conservatism and competition on avian community structure. *Ecology* 87: S14–S28.

- Lowery, G. H. & Monroe, B. L. 1968. Parulidae. Pp. 3–93 in Paynter, R. A. (ed.) *Check-list of birds of the world*, vol. 14. Mus. Comp. Zool., Cambridge, MA.
- Parkes, K. C. 1951. The genetics of the Golden-winged × Blue-winged Warbler complex. *Wilson Bull.* 63: 5–15.
- Parkes, K. C. 1961. Taxonomic relationships among the American redstarts. *Wilson Bull.* 73: 374–379.
- Parkes, K. C. 1978. Still another parulid intergeneric hybrid (*Mniotilta* × *Dendroica*) and its taxonomic and evolutionary implications. *Auk* 95: 682–690.
- Parkes, K. C. 1995. Reinterpretation of the probable parentage of a hybrid wood-warbler (*Seiurus* × *Dendroica*). *Auk* 112: 510–511.
- Ridgway, R. 1902. The birds of North and Middle America, pt. 2. *US Natl. Mus. Bull.* 50: 1–834.
- Swainson, W. 1827a. A synopsis of the birds discovered in Mexico by W. Bullock, F. L. S., and H. S., Mr. William Bullock, jr. *Philos. Mag., n. s.* 1(5): 364–369, 433–442.
- Swainson, W. 1827b. On several groups and forms in ornithology, not hitherto defined. *Zool. J.* 3(15): 158–175, 343–363.
- Wallace, D. I. M. 1980. A review of waterthrush identification with particular reference to the 1968 British record. Pp. 199–204 in Sharrock, J. T. R. (ed.) *Frontiers of bird identification*. Macmillan, London.

Address: Stevenshof 17, 2312 GM Leiden, The Netherlands, e-mail: g.sangster@planet.nl

© British Ornithologists' Club 2008

## The range of Long-tailed *Cinclodes* *Cinclodes pabsti* extends to Minas Gerais (Brazil)

by Guilherme Henrique Silva de Freitas, Lilian Mariana Costa,  
Jordana Demicheli Ferreira & Marcos Rodrigues

Received 22 October 2007

Long-tailed *Cinclodes* *Cinclodes pabsti* is an ovenbird endemic to the highlands of Rio Grande do Sul and Santa Catarina, southern Brazil (Sick 1973). Besides *C. pabsti*, 12 other species are currently recognised in *Cinclodes*, ten of them restricted to the Andes, ranging from Venezuela to Argentina (Tierra del Fuego) and some at very high elevations. The other two species are endemic to isolated highlands in southern Córdoba and San Luis, Argentina (Ridgely & Tudor 1989, Remsen 2003).

The occurrence of Long-tailed *Cinclodes* in southern Brazil—disjunct from its congeners—evidences the biogeographical relationship between faunas of the Andes and the mountains of southern Brazil (Simpson-Vuilleumier 1971, Simpson 1979, Sick 1985, Safford 1999, Cheeser 2004), which is important for a better understanding of the geographical history of South America.

The presence of Long-tailed *Cinclodes* in Minas Gerais, c.1,000 km north of its northernmost known locality, is reported here. Serra do Cipó (19°12'–19°34'S, 43°27'–43°38'W) is in central Minas Gerais, south-east Brazil, in the southern Espinhaço range. Altitudinal range is c.800–1,600 m (Melo-Junior *et al.* 2001). These mountains separate two important biomes: the Atlantic Forest to the east and the *Cerrado* (Brazilian savanna) to the west (Giulietti *et al.* 1997). The highest parts of the Espinhaço comprise *campos rupestres*, grassland with many endemic plant taxa growing on shallow-ground rocky outcrops, with scattered shrubs and small trees (Giulietti *et al.* 1997).

The first record was on 29 December 2006, when a single was observed foraging near a small lodge in Serra do Cipó National Park, Barraco de Tábuia (19°21'S, 43°29'W; 1,496 m). In January 2007 one was photographed near a lodge locally known as Alto do Palácio, within the park boundaries (19°15'S, 43°31'W; 1,345 m). What was presumably the same bird remained there until 26 February 2007. The photograph was compared to specimens in the